WHAT IS CLAIMED IS:

1. A method for processing a partially fabricated semiconductor wafer having a layer of resistor material patterned to form a resistor on a surface of the wafer, the method comprising:

(a) performing a wet pre-metallization cleaning step on the surface of the wafer;

(b ) performing an RF plasma sputter etching process on the surface of the wafer in a first reactor;

(c) advancing the wafer from the first reactor into a second reactor while maintaining unbroken vacuum conditions in the first and second reactors;

(d ) depositing a layer of metal on the surface of the wafer in the second reactor;

(e) patterning the metal to form a predetermined metal interconnection pattern thereof;

(f) performing a stabilization bake cycle on the wafer, measuring the TCR of the resistor material, and rejecting the wafer if the measured TCR is greater than a predetermined

value; and

(g) completing fabrication of the wafer.

2. The method of claim 1 wherein the resistor material is composed of nichrome.

3. The method of claim 2 wherein step (b) is performed by passing argon gas into the first reactor with the wafer therein and producing an argon plasma in the first reactor adjacent to the surface of the wafer, and the applying an RF signal to the wafer to cause argon ions to impinge on the surface of the wafer and remove contaminant material therefrom.

4. The method of claim 2 including performing step (b) with the wafer at a temperature of approximately 400 degrees Centigrade.

5. The method of claim 3 including performing step (b) while applying an RF signal of approximately 100 volts and having a frequency of approximately 13.5 MHz to the wafer to cause it to attract the argon ions.

6. The method of claim 5 including performing step (b) for approximately 15-30 seconds.

7. The method of claim 3 wherein step (b) includes providing an argon plasma by means of an inductive coil wound around a reaction chamber of the first reactor by applying a medium frequency power signal across the inductive coil.

8. The method of claim 7 wherein the frequency of the medium frequency power signal is approximately 100 kHz.

9. The method of claim 8 including passing argon gas into the first reactor at a rate of approximately 25 standard cc per minute.

10. A method for processing a partially fabricated semiconductor wafer having a layer of nichrome resistor material patterned to form a plurality of resistors on a surface of the wafer, the method comprising:

(a) performing a wet pre-metallization cleaning step on the surface of the wafer in a first reactor;

(b ) passing argon gas into the first reactor with the wafer therein and producing an argon plasma in the first reactor adjacent to the surface of the wafer by applying a power signal having a frequency of approximately 100 kHz to an inductive coil wound around a reaction chamber of the first reactor and the applying an RF signal having a voltage of approximately 100 volts and a frequency of approximately 13.5 MHz to the wafer for approximately 15-30 seconds to cause argon ions to impinge on the surface of the wafer and remove contaminant material therefrom;

(c) advancing the wafer from the first reactor into a second reactor while maintaining unbroken vacuum conditions in the first and second reactors;

(d) depositing a layer of metal on the surface of the wafer in the second reactor;

(e) patterning the metal to form a predetermined metal interconnection pattern thereof;

(f) performing a stabilization bake cycle on the wafer, measuring the TCR of the nichrome resistor material, and rejecting the wafer if the measured TCR is greater than a predetermined value; and

(g) completing fabrication of the wafer.

11. The method of claim 10 including performing step (b) with the wafer at a temperature of approximately 400 degrees Centigrade.

12. The method of claim 11 including passing the argon gas into the first reactor at a rate of approximately 25 standard cubic centimeters per minute.

13. A multiple-reactor system for processing a partially fabricated semiconductor wafer having a layer of resistor material patterned to form a plurality of nichrome resistors on a surface of the wafer, comprising:

(a) a first reactor for performing an RF plasma sputter etching process on the surface of the wafer;

(b) means in the multi-reactor system for advancing the wafer from the first reactor into a second reactor while maintaining unbroken vacuum conditions in the first and second reactors; and

(c) means in the second reactor for depositing a layer of metal on the surface of the wafer.

14. The multiple-reactor system of claim 13 including means for passing argon gas into the first reactor with the wafer therein, and means for producing an inductively coupled plasma of argon ions in first reactor adjacent to the surface of the wafer.

15. The multiple-reactor system of claim 14 including means for applying an RF signal to the wafer to cause it to attract argon ions from the plasma to close argon plans to pinch on the surface of the wafer and remove contaminant material therefrom.

16. The multiple-reactor system of claim 15 including means for maintaining the wafer at approximately 400 degrees Centigrade.

17. The multiple-reactor system of claim 15 wherein the means for producing an argon plasma includes an inductive coil and conductors for applying power at a frequency of approximately 100 kHz to the inductive coil.

18. The multiple-reactor system of claim 17 wherein the RF signal has a voltage of approximately 100 volts and a frequency of approximately 13.5 MHz.